

Attorney Docket No. 6007

I. Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. [Currently amended] A crack-resistant paper or board comprising a cellulose fiber network web; and a thin layer of a [discontinuous] polymer material impregnated into the web in discontinuous geometrical formations.
2. [Currently amended] The crack-resistant paper or board as claimed in Claim 1, wherein the [thin discontinuous] polymer material is a thermoplastic or thermoset material.
3. [Currently amended] The crack-resistant paper or board as claimed in Claim 1, wherein the geometrical formations are [thin] rectangular stripes, equi-distant circles or diamond-shape formations.
4. [Original] The crack-resistant paper or board as claimed in Claim 1, wherein the polymer is approximately 5%-20% a basis weight of the paper or board.
5. [Cancelled] The crack-resistant paper or board as claimed in Claim 1, wherein the polymer is selected from the group consisting of polybutadiene, acrylonitrile-butadiene, ethylene vinyl acetate-butadiene and styrene-butadiene.
6. [Original] The crack-resistant paper or board as claimed in Claim 1, wherein the polymer is selected from the group consisting of a latex blend, an acrylic polymer, a polyester resin and a liquid crystalline polymer.

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7. [Cancelled] The crack-resistant paper or board as claimed in Claim 1, wherein the polymer is a copolymer selected from the group consisting of polyhydroxybutyrate-butanoate and a cellulose acetate butyrate.

8. [Original] The crack-resistant paper or board as claimed in Claim 1, wherein the paper or board has a polymer material coated on a surface of the paper or board.

9. [Cancelled] A process for producing a crack-resistant paper or board comprising the step of:

depositing a thin discontinuous polymer onto a cellulose fiber network web and, then having same be absorbed into the cellulose fiber network web, thereby producing a geometrical formation.

10. [Cancelled] The process as outlined in Claim 9, further comprising the step of depositing the thin discontinuous polymer through a geometrical template and onto a formed and dried cellulose fiber network web.

11. [Cancelled] The process as outlined in Claim 9, wherein the geometrical formations are thin rectangular stripes, equi-distant circles or diamond-shaped formations.

12. [Cancelled] The process as outlined in Claim 9, wherein the polymer is approximately 5%-20% of a basis weight of the paper or board.

13. [Cancelled] The process outlined in Claim 9, wherein the polymer is selected from the group consisting of polybutadiene, acrylonitrile-butadiene, ethylene vinyl acetate-butadiene and styrene-butadiene.

14. [Cancelled] The process outlined in Claim 9, wherein the polymer is selected from the group consisting of a latex blend, an acrylic polymer, a polyester resin and a liquid crystalline polymer.

15. [Cancelled] The process outlined in Claim 9, wherein the polymer is selected from the group consisting of polyhydroxybutyrate-butanoate and a cellulose acetate butyrate.

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16. [Cancelled] The process outlined in Claim 9, further comprising the step of coating a polymer onto the formed crack-resistant paper or board to produce a coated paper or board network.

17. [Cancelled] The process outlined in Claim 16, further comprising the step of printing on the coated paper or board network.

18. [Currently Amended] A crack-resistant paper or board comprising a cellulose fiber network web; and a thin discontinuous polymer material impregnated into the web in geometrical formations, wherein the polymer is selected from the group consisting of poly-butadiene, acrylonitrile-butadiene, ethylene vinyl acetate-butadiene and [styrene-butadiene and] styrene butadiene.

19. [Previously Presented] A crack-resistant paper or board comprising a cellulose fiber network web; and a thin discontinuous polymer material impregnated into the web in geometrical formations, wherein the polymer is a copolymer selected from the group consisting of polyhydroxybutyrate-butanate and a cellulose acetate butyrate.

20. [New] The crack-resistant paper or board as claimed in Claim 1 wherein the polymer is selected from the group consisting of diene-based rubber, acrylics, latex blends, polyesters and any combination thereof.

21. [New] The crack-resistant paper or board as claimed in Claim 1 wherein said fibers are pulp fibers.

22. [New] The crack-resistant paper or board as claimed in Claim 3 wherein the geometrical formations are rectangular stripes.

23. [New] The crack-resistant paper or board as claimed in Claim 3 wherein the geometrical formations are equi-distant circles.

24. [New] The crack-resistant paper or board as claimed in Claim 3 wherein the geometrical formations are diamond-shape formations.

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25. [New] A crack-resistant paper or board consisting essentially of a cellulose fiber network web; and a thin layer of a polymer material impregnated in the web in discontinuous geometrical formations.

26. [New] The crack-resistant paper or board as claimed in Claim 25, wherein the polymer material is a thermoplastic or thermoset material.

27. [New] The crack-resistant paper or board as claimed in Claim 25, wherein the geometrical formations are rectangular stripes, equi-distant circles or diamond-shape formations.

28. [New] The crack-resistant paper or board as claimed in Claim 25, wherein the polymer is approximately 5%-20% a basis weight of the paper or board.

29. [New] The crack-resistant paper or board as claimed in Claim 25, wherein the polymer is selected from the group consisting of a latex blend, an acrylic polymer, a polyester resin and a liquid crystalline polymer.

30. [New] The crack-resistant paper or board as claimed in Claim 25, wherein the polymer is a copolymer selected from the group consisting of polyhydroxybutyrate-butanate and a cellulose acetate butyrate.

31. [New] The crack-resistant paper or board as claimed in Claim 25, wherein the paper or board has a polymer material coated on a surface of the paper or board.

32. [New] The crack-resistant paper or board as claimed in Claim 25 wherein the polymer is selected from the group consisting of diene-based rubber, acrylics, latex blends, polyesters and any combination thereof.

33. [New] The crack-resistant paper or board as claimed in Claim 25 wherein said fibers are pulp fibers.

34. [New] The crack-resistant paper or board as claimed in Claim 27 wherein the geometrical formations are rectangular stripes.

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35. [New] The crack-resistant paper or board as claimed in Claim 27 wherein the geometrical formations are equi-distant circles.

36. [New] The crack-resistant paper or board as claimed in Claim 27 wherein the geometrical formations are diamond-shape formations.